The Examiner has withdrawn the rejection made in the previous Office Action and has rejected claims 43-45, 48, 50-52, 57-59, 62, 63 and 65-67 under 35 USC § 103(a) as allegedly being unpatentable over Maloney et al in Bi et al. Claims 46, 47, 49, 53, 60, 61, 64 and 68 were rejected under 35 USC § 103(a) as allegedly being unpatentable over Maloney in view of Bi and further in view of Hollenberg. Claims 54-56 and 69-71 were rejected under 35 USC § 103(a) as allegedly being unpatentable over Maloney in view of Bi and further in view or Oros et al and Fattouche et al. Claims 72 and 74-79 were rejected under 35 USC § 103(a) as allegedly being unpatentable over Maloney in view of Oros and Fattouche. Claim 73 was rejected under 35 USC § 103(a) as allegedly being unpatentable over Maloney in view of Oros and Fattouche and further in view of Bi.

In response to this rejection made by the Examiner, applicant has amended claim 43 and has amended claims 45, 51 and 52 to be consistent with the language of claim 43. Applicant has also cancelled 44 and 57-71 without prejudice.

Applicant respectfully submits that independent claim 44, as amended, and independent claim 72, as last presented, recite subject matter which clearly patentably distinguishes over the art of record cited by the Examiner. The dependent claims depending from claims 43 and 72 are also patentable over the prior art cited by the Examiner.

Claim 43 recites that in the method for continuous tracking of mobile units, the at least one base unit has a phase array antenna with three or more single antenna elements.

The location of each mobile unit is determined using a single one of each one of the at least one stationary unit by determining azimuths of each mobile unit from the phase

difference at a plurality of points of the single antenna elements of the single base unit and calculating the polar coordinates of intersections of the azimuths.

The method according to the present invention recited in claim 43 uses the three single antenna elements of the base station and the phase difference is measured between the first and second antenna, the second and third antenna and between the first and third antenna using the equipment described in the specification. Having the phase differences at two or more different points of the single element antenna locations, a single base station can calculate the angle or azimuth to the mobile unit from these points. The location of the mobile unit is going to be at the intersection of the azimuths from at least two different points of the base station. The calculations of the polar coordinates is explained with respect to Fig. 2A of the specification.

The Maloney system was designed for a cellular environment where the distances between the base station and the mobile units is large and the calculation is done in the central control land station. In the invention as recited in claim 51, the calculation is done in the base station.

In Maloney, the location parameters are measured by the support land base stations following the request from the control land station for localization of certain mobile transmitters. The calculation is performed at the control land station.

The present invention is intended for an indoor environment, usually in an area where the mobile units are not far from the base station. The calculation of the coordinates is made based on measurements of the phase difference of the signal arriving at the three single antenna elements at one base station.

Maloney uses pairs of antenna elements, and moreover, does not calculate different azimuths from the phase differences at a plurality of points of the single antenna elements.

Another key difference between the method of the present invention and Maloney is that the present invention tracks the mobile units continuously. The periodic polling of each individual transceiver is for continuous tracking using the periodic polling method. In Maloney, the cellular environment does not continuously track the mobile units.

The Bi reference teaches a stationary base unit which periodically poles at least one mobile unit to trigger transmission of at least one signal from the mobile unit to the base unit. Bi does not teach or suggest the present invention, rather it uses a time difference of arrival of the signal from a mobile phone. At least three base stations are involved in the process from which one of them is a primary base station. Bi does not teach or suggest using a single base station to calculate the position of a mobile unit.

The Hollenberg, Oros and Fattouche references cited to show other features do not cure the fatal defects of the primary references.

With regard to claim 72, a method for calibrating a system for continuously tracking mobile units is described, wherein a single base station is used for the process. Maloney teaches the use of several base stations for location detection and Oros and Fattouche do not cure the fatal defects of Maloney to obtain the present invention as claimed.

Applicant therefore respectfully submits that the presented claims recite subject matter which clearly patentably distinguishes over the art of record under 35 USC § 102 and 35 USC § 103.

Applicant requests reconsideration and an early favorable action on the merits.

Respectfully submitted,

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